It is still a further desire of the invention to provide a data cable that has an interior support that accommodates a variety of AWG's and impedances, improves crush resistance, controls NEXT, controls electrical instability due to shielding, increases breaking strength, and allows the conductors such as twisted pairs to be spaced in a manner to achieve positive ACR ratios.

Other desires, results, and novel features of the present invention will become more apparent from the following drawing and detailed description and the accompanying claims.

Brief Description of the Drawings

Fig. 1 is a vertical cross-sectional view taken along a plane of one embodiment of this invention.

FIG 1A IS AN EXPLODED VIEW OF THE CABLE COVERING.

Fig. 2 is a top right perspective view of this invention. The view shows the cable cut away to expose its various elements. The view further shows the helical twist of the prongs or splines.

Fig. 3 is a vertical cross-section of the interior support or star separator showing some of the dimensions of the interior support or star separator.

Fig. 4 is a vertical cross-section of the interior or star separator support showing the features of the prongs or splines.

utilized for extremely well controlled electricals. A metal drain wire (42) is spirally wrapped around the shield. The drain spiral runs the length of the cable. The drain functions as a ground.

My use of the term "cable covering" refers to a means to insulate and protect my cable. The cable covering being exterior to said star member and insulated conductors disposed in said grooves. The outer jacket, shield, drain spiral and binder described in the shown embodiment of FIG 1A provide an example of an acceptable cable covering. The cable covering, however, may simply include an outer jacket.

The cable may also include a gel filler to fill the void space (46) between the interior support, twisted pairs and a part of the cable covering.

An alternative embodiment of the cable utilizes an interior support having a first innér material (50) and a different second outer material (51) (see Fig. 5). The second material is a conforming shield which conforms to the shape defined by the outer surface of the first material (50). The conforming shield is a foil shield. The foil shield should have enough thickness to shield the conductors from each other. The shield should also have sufficient thickness to avoid rupture during conventional manufacture of the cable or during normal use of the cable. The thickness of the conforming shield utilized was about 3 mm. The thickness could go down to even .3 mm. Further,